

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.  $SECTOR~\textbf{11} \longrightarrow CHART~INFORMATION$ 

# **SECTOR 11**

### THE GULF OF OMAN—RAS AL HADD TO RAS DIBA

**Plan.**—This sector describes the SW shore of the Gulf of Oman between Ras al Hadd and Ras Diba. The sequence is NW from Ras al Hadd.

#### General Remarks

11.1 Winds—Weather.—In winter, over the Gulf of Oman, the winds are mainly N, with the prevailing direction NW. Calms are more frequent than in the Persian Gulf; the average wind speed is 7 to 11 knots.

Strong squalls winds from the E, accompanied by rain are frequent. In spring, the winds are variable, but in general there is a decrease in the NW winds and an increase in the SW winds until by May SW wind predominate.

The average wind speed is 6 to 10 knots. In June, NW and N winds are still comparatively frequent; however, in July the prevailing winds are from the SE. On the N shores of the Gulf of Oman the early morning winds are from the E. They veer during the day, and by night they blow between SE to SW.

In June, before the Southwest Monsoon becomes fully established over the Arabian Sea, tropical cyclones occasionally form on the Arabian Sea, on the N boundary of the advancing SW winds. These storms have been known to reach Gulf of Oman giving rise to heavy gales.

In September and October, the frequency of SE winds in the Gulf of Oman gradually decreases, and that of the NW winds increases.

The average wind speed is between 2 to 6 knots. On the coast, the winds are for the most part light and variable, with frequent calms in the early morning.

In the Persian Gulf and the Strait of Hormuz, the hottest months of the year are July and August; the warmest month in the Gulf of Oman is in June, prior to the arrival of the Southwest Monsoon. Over the whole region, January is the coolest month.

Bad visibility in the Persian Gulf and the Gulf of Oman may be caused by early morning fog, salt haze, or dust. Of these, dust is by far the most common. Bad visibility caused by dust haze is more frequent on the S coast of Iran than in the Persian Gulf, and in the latter occurs more often on the Arabian side.

Dust haze may occur in all seasons but is less frequent during and immediately after the winter rains. During the summer months, when the rains cease and the temperature rises, the ground dries up and fine dust is carried into the atmosphere. The amount of dust suspended in the air is increased by vigorous convection and produces a general haziness which diminishes the visibility.

Dust haze occurs most often from May to August. Such haze usually reduces the visibility to between 2 to 6 miles, and the visibility may drop to 0.5 mile. This often occurs on the day following a sever dust storm, albeit the wind at the time may be insufficient to raise dust.

Dust storms and sandstorms occur in all parts and seasons in the Persian Gulf and the Gulf of Oman. In winter, dust storms are associated chiefly with the passage of W depressions, and in summer with strong shamal winds.

Dust storms are most frequent during the months of June and July. Fog occurs at times near the shores of the Persian Gulf and may be dense. It is present only in the early morning and never lasts more than a few hours.

**Tides—Currents.—**In the Gulf of Oman, current directions are variable, and velocities may attain up to 1.5 knots; however, they usually do not exceed 1 knot.

In February and March, a branch of the Sonal Current off Ras Al Hadd turns and sets NW along the gulf, turning in the W portion of the gulf, and setting E along the N shore of the gulf.

From April through October, the coastal current from the Arabian Sea appears to extend to the N shore of the gulf where it sets W. The current then turns in the W portion of the gulf and sets SE along the S shore of the gulf.

In November the current appears to set throughout the gulf. In December and January the W current in the Arabian Sea continues along the N shore of the gulf, turns into the W portion of the gulf, and sets SE along the S shore.

Through the Strait of Hormuz, there is a distinct inward flow from the Gulf of Oman during the Southwest Monsoon, and a slight outward flow during the remainder of the year. During this latter period, some water continues to flow into the Persian Gulf; however, these currents tend to hug the Iranian side of the straits.

Tidal currents in the Gulf of Oman are the strongest in its N portion. The flood generally sets NNW, with rates up to 2 knots; the ebb sets SSE, with rates up to 1.8 knots. Along the SW shore, tidal currents are generally negligible.

In the Strait of Hormuz, tidal currents are strong ,attaining rates up to 4.8 knots.

**Depths—Limitations.—**Depths in the Gulf of Oman are generally considerable off the high sections of the coast; along the low-lying portions of the shoreline the depths are not as great. The 200m curve lies 1 mile offshore opposite Ras al Hadd, 4 miles offshore at Masqat, 23 miles offshore at Qalat Kalbah, and 43 miles offshore at Ras Diba. Except for Jazirat al Fahl and Jazair Daymaniyat, the coastal approaches are clear.

In a few places, between As Sib and Qalat Kalbah, shoals lie up to 2 miles offshore but within the 20m curve.

**Aspect.**—Between Ras al Hadd and Ras al Hamra, 98 miles to the NW, the coast consists of sandy plains alternating with cliffed promontories and backed by the rugged foothills of the Oman Mountains. The sea approaches are very deep and free of all obstructions. In general the coast is steep-to and rocky.

The Eastern Hajar Range closely parallels the coastline; in places these mountains rise to over 2,134m within 20 miles of the shore. High rocky cliffs face the sea throughout most of this sector.

From Ras al Hamra NW for 175 miles to Khawar Fakkan, the low, sandy coast forms the E edge of a wide region called

Sahil al Batinah which lies between the steep Eastern Hajar Range and the sea.

The interior is arid and mountainous. Except for the Jazair Daymaniyat, which lie 8 miles offshore some 25 miles WNW of Ras al Hamra, the approaches are clear.

A shoreline of bold, rocky cliffs, with deep water close inshore, extends from Khawr Fakkan N for 17 miles to Ras Diba.

Khawr Fakkan lies between a hilly promontory and a rocky point, 3 miles to the N. From Khawr Fakkan, the low sandy coast continues N.

**Pilotage.**—Pilotage for the Persian Gulf and the Strait of Hormuz is available by pilots based at Khawr Fakkan and Fujairah (UAE).

Pilots at Khawr Fakkan can be contacted by VHF and board in position 25°24'N, 56°33'E.

Vessels should send their ETA and request for pilotage to "LAMNALCO" through Bahrain Radio (A9M) 72 hours, 48 hours, and 24 hours prior to arrival. Vessels should also maintain a watch on 2182 kHz, from at least 24 hours prior to arrival, and VHF channel 16 from at least 12 hours prior to arrival.

Pilots at Fujairah can be contacted by VHF and board in position 25°12'N, 56°36'E.

Vessels should send their ETA and request for pilotage to "Fujairah Marine Services" 72 hours, 48 hours, and 24 hours prior to arrival. Vessels should also maintain a watch on VHF channel 16 from at least 12 hours prior to arrival.

The pilot station can also be contacted via E-mail at fujamar@emitates.net.ae or ndadubai@emirates.net.ae.

**Regulations.**—The government of the United Arab Emirates has decided to increase its air and sea surveillance with respect to sea surface oil pollution in the light of the recent major international oil spills.

All vessels traversing, or at anchor within, the territorial waters will be obliged to report the sighting of any sea surface oil pollution. Should oil be sighted surrounding any vessel and such vessel has failed to report the presence of the same, the vessel concerned shall be liable to a fine.

**Anchorage.**—Anchoring within the territorial waters of the State of Sharjah between 25°00'N and 25°06'N, and between 25°19.50'N and 25°24.75'N, is limited to vessels proceeding to the port of Khawr Fakkan or to cargo vessels requiring certain facilities available from the port. Large tankers are not permitted to anchor within 10 miles of the coast.

An anchorage, specially designated for vessels wishing to anchor in the territorial waters of Oman S of 24°00'N, and wishing to perform repairs or waiting for orders, lies in the waters N of Jazirat al Fahl.

**Caution.**—Numerous oil and gas exploration rigs, with associated pipelines and structures, may be encountered in the waters described in this sector.

# Ras al Hadd to Masqat

11.2 Ras al Hadd (22°33'N., 59°48'E.), the S entrance point of the Gulf of Oman, is a low sandy point which is difficult to distinguish from the adjacent coast lying S and W of the cape. A main light, equipped with a racon, is shown from a

prominent framework tower, 38m high, standing on the E side of cape.

The N side of Ras al Hadd is steep-to but S of the point depths of less than 20m extend up to about 2 miles offshore.

The strong and variable currents off Ras al Hadd are greatly influenced by the prevailing winds.

Sometimes, generally toward the end of the Southwest Monsoon, while a current sets N along the coast S of Ras al Hadd another current sets SE along the coast between Ras al Hadd and Ras Abu Dawud, about 68 miles to the NW.

These two currents appear to combine and turn NE off Ras al Hadd. This current sets NE at a rate of about 2 knots, it is further augmented by the E tidal current from the Gulf of Oman.

The coast of Oman from Ras al Hadd is generally steep-to. Between the cape and Ras Abu Dawud, the 200m curve lies from 1 to 4 miles offshore.

From Ras Abu Dawud to the village of Yiti, 19 miles to the NNW, the curve lies up to 7 miles offshore and in the vicinity of Masqat 1.5 to 3.5 miles offshore. The few dangers, as well as some of the islands, lie close inshore.

Anchorage is available, in depths of 14 to 18m, coral, 0.5 to 0.7 mile due E of Al Hadd village. The water shoals rapidly from 18m to 9m and the bottom is distinctly visible. The anchorage is open to the sea.

**Caution.**—An IMO-adopted Traffic Separation Scheme (TSS), which may best be seen on the chart, lies in the waters off Ras al Hadd. The area lying between the westernmost separation limit and the coast has been designated as an Inshore Traffic Zone.

11.3 Between Ras al Hadd and Ras ash Shajar, 40 miles to the NW, the coast is generally steep-to and free of off-lying dangers. Low cliffs and low broken hills comprise the shoreline which is broken by several small inlets. The Jabal Bani Jabir range, with heights up to about 1,371m, backs the coast. Farther inland the mountains attain heights of 1,981m.

**Khawr al Hajar** (22°32'N., 59°46'E.) is entered between Ras al Hayyah and Ras al Hammah. The entrance is only about 0.1 mile wide but depths shoal rapidly to less than 3m; the greater part of the inlet dries.

Tidal currents near the entrance of Khawr al Hajar set E and W. The E current is weak, but the W current attains a rate of 1.5 knots. Fishing boats shelter here, but the bay is exposed to strong N winds.

**Khawr al Jaramah** (22°32'N., 59°44'E.) lies 2 miles W of Khawr al Hajar. A narrow, tortuous channel, 1 mile long and from 91 to 274m wide, leads between cliffs 18.3m high into the inlet.

Inside the entrance, Khawr al Jaramah opens up, with surrounding cliffs 30 to 60m high and a low sandy beach along the SW shore of the bay. Gusts of wind are prevalent in the channel.

About 0.5 mile inside the entrance, the channel is narrowed to 55m by a shoal extending from the W shore. There is a least depth of 6.4m in the channel but only about 2.1m over the shoal. Tidal currents set through the entrance channel at rates of up to 2 knots.

**Directions.**—Local vessels, with drafts of less than 4.6m, use Khawr al Jaramah as a harbor of refuge. It is advisable to

enter the inlet on the first of the ebb tidal current; at other times the eddies at the bends of the channel make steering very difficult. Gusts of wind are prevalent in the channel.

A conspicuous flat-topped hill on the SW side of Khawr al Jaramah bearing 176° leads to the entrance. This hill should not be confused with the pinnacle-shaped hill, with a flat summit, located a few miles farther to the W.

After entering the channel, keep close to the E shore until past the shoal extending from the W shore. Then proceed in mid-channel, passing NE of the islet at the S end of the channel, into the anchorage area S of the islet.

Khawr al Jaramah should not be entered unless the height of the tide permits the vessel to keep in mid-channel through the entire length of the passage.

Anchorage is available, in 5.5 to 7.3m, in an area about 1 mile long and 0.2 mile wide across the N part of the inlet.

During the Southwest Monsoon, anchorage can be taken, in 21.9m, 0.5 mile offshore, between Khawr al Hajar and Khawr al Jaramah, or about 0.5 mile off the entrance to Khawr al Jaramah in 18 to 22m, mud and sand.

11.4 Ras Sharh (22°34'N., 59°39'E.), a slightly projecting point, lies 4.5 miles W of Khawr al Jaramah; cliffs comprise the intervening coast. From this point to Sur, 6 miles farther W, the coast consists of low broken hills with cliffs, interrupted in places by sandy beaches.

**Sur** (22°34'N., 59°32'E.) has two settlements, one on each side of Wadi Fulayj, a narrow entrance channel leading into an extensive inlet which nearly dries. Ayqah (Aika) is located on the E side; Muqraymatayn (Umm Kareimatein) is on the W side.

Anchorage is available, in 14.6m, sand, with the E entrance point of Wadi Fulayj bearing 178°, 0.6 mile distant. It is not advisable to anchor closer in, as a heavy swell makes up quickly. A 4.7m patch lies 0.3 mile NNE of Ra's Ayqah.

It was reported (2001) that a fishing harbor, protected by breakwaters, has been constructed on the W side of the entrance to the inlet.

**Qalhat** (22°42'N., 59°23'E.), a small village, lies about 11 miles NW of Sur. Local small craft shelter in the lee of a small projecting point close inshore of Qalhat. Qalhat is sometimes mistaken for Tiwi, another village 11 miles farther to the NW.

**Qalhat LNG Terminal** (22°41'N., 59°24'E.), consisting of mooring buoys, is situated about 1.4 miles SE of the village. Vessels must send an ETA to Qalhat Marine 96 hours, 48 hours, 24 hours, and 5 hours in advance. Pilots can be contacted by VHF and board in position 22°41.28'N, 59°26.00'E.

**Ras Ash Shajar** (22°56'N., 59°12'E.), a low sandy cape, is well-defined only from close in. A shoal extends 0.5 mile offshore from the cape.

The mountains recede from the coast for a distance of 3.5 miles on both sides of the cape. During a shamal ,small craft shelter very close inshore SE of the cape.

11.5 Ras Abu Dawud lies 28 miles NW of Ras ash Shajar. Low cliffs front the first 18 miles of this stretch of coast, which then becomes low and sandy until within 2 miles of Ras Abu Dawud, where it turns rocky.

About 10 miles NW of Ras ash Shajar, the Jabal Bani Jabir range recedes from the coast in a WNW direction and ends abruptly about 12 miles inland in a large bluff, which forms the SE entrance point to Wadi Hayl al Ghaff (Devil's Gap). This great valley stretches SW between two mountain ranges.

Jabal Qaryat (Qurayyat) rises to a height of 1,899m on the N side of Wadi Hayl al Ghaff. The peak is located at the S end of the mountain range extending NW from Wadi Hayl al Ghaff.

**Daghmar** (23°13'N., 58°59'E.), a small fishing village, is located on a prominent hill.

Foul ground extends up to 0.5 mile offshore from the point to a position 3 miles to the NW. A low, sandy point lies about 1.5 miles N of the village.

**Qurayyat** (23°16'N., 58°55'E.), a village, is located about 5 miles NW of Daghmar, on a sandy foreshore, at the foot of Jabal Abu Dawud.

Anchorage is available 1.5 miles offshore at Qaryat al Kabirah, in 22m, sand, with the rocky islet off the mouth of the inlet, close S of the village, bearing 227° and Ras Abu Dawud bearing 337°. Anchorage can be taken, in a depth of 9m, 0.25 mile offshore between the village and Ras Abu Dawud.

It was reported (1995) that a small fishing harbor, protected by breakwaters, was under construction in the vicinity of Qurayyat.

**11.6 Ras Abu Dawud** (23°19'N., 58°55'E.) is steep, rocky, broken up into several points, and not easy to identify from a distance. A rocky islet, 30m high, lies 0.15 mile N of the point.

During a shamal, small local vessels shelter in the small bay close S of the cape.

Cliffs front the shoreline for 4 miles NW of Ras Abu Dawud. From there to the village of As Sifah, 6.5 miles farther to the NW, the coast is low and sandy. In the vicinity of As Sifah the coastal range swings inland, leaving a plain between the shore and the mountain.

Masqat lies 15 miles NW of As Sifah; the intervening coast consists almost entirely of cliffs alternating with sandy bays and inlets.

A range of rugged hills which extends to Ras al Hamra, about 5 miles WNW of Masqat, backs this stretch of the coast.

Jabal Abu Dawud, a detached light-colored mountain, rises abruptly from the coast in the vicinity of Ras Abu Dawud to a height of 1,219m.

A wide valley lies between this mountain and the range farther inland. From a distance, approaching from the SE, Jabal Abu Dawud presents an irregular outline; it appears as an island, steep on its seaward side with a long slope to the W.

The foot of Jabal Abu Dawud extends for 8 miles along the coast.

**11.7 Ras al Khayran** (23°31'N., 58°45'E.), a light-colored cliff, 18m high and backed by light-colored hills, lies 5 miles NNW of As Sifah. Four small sandy bays lie SE of the point.

**Bandar al Khayran** (Khairan) (23°31'N., 58°44'E.), a small harbor frequented only by fishing craft, is located S of the westernmost of two islands lying close off the mainland immediately W of Ras al Khayran. The two islands are similar in appearance and are difficult to distinguish.

**Yiti** (23°33'N., 58°42'E.), a small village on the shore of a small sandy bay, is located about 3 miles WNW of Bandar al Khayran.

Hassar Shaikh Rock, 24m high, and a smaller rock, 15m high, to the E, stand on the foreshore of Yiti. These rocks appear black against the light-colored hills inland and are conspicuous.

**Bandar Jissah** (23°33'N., 58°39'E.), a small bay 2 miles N of Yiti, is difficult to distinguish from more than 1 mile offshore. A small steep islet, 48m high, divides the entrance to this bay into two channels.

The E channel is 0.3 mile wide, with a least depth of 12.8m in the fairway. The W channel is nearly blocked by a flat rock, with depths of only 2.7m on each side.

Anchorage is available in Bandar Jissah, in 7.3 to 12.8m; the greatest depths lie just inside the E entrance.

From Bandar Jissah to Masqat, 5 miles to the NW, a succession of rocky-cliffed headlands fronts the coastline, which is broken by small sandy bays and backed by numerous hills.

**Jabal Bardah** (Saddle Hill) (23°35′N., 58°36′E.), about 4 miles WNW of Bandar Jissah and about 2 miles inland, rises to a height of 408m. Two sharp peaks form the summit of this dark rugged mountain. In range, the peaks bear 250°; from the N, the peaks appear farther apart and are less conspicuous.

Ras al Kanada (23°37'N., 58°37'E.), about 4 miles NW of Bandar Jissah, terminates in a cliff, 76m high, with Pillar Rock, 31m high, about 0.1 mile to the N. Two small rocks lie 91 and 183m offshore from a point about 0.25 mile NW of Pillar Rock

**Jazirat Masqat** (Muscat Island) (23°37'N., 58°36'E.) has a steep rocky shoreline; the W side of the island forms the E side of Khawr Masqat.

**Caution.**—A disused explosives dumping area, the limits of which may best be seen on the chart, lies about 17 miles ENE of Jazirat Masqat.

# Masqat to Dawhat Dabbah

11.8 Between Ras Masqat and Ras ash Shutayfi, 1.5 miles to the WNW, the coast is broken by 5 bays; Khawr Masqat and Dawhat Matrah are the largest. From Ras Shutayfi the coast turns W for about 4 miles to Ras al Hamra.

Several small bays, separated by rocky headlands and encumbered with off-lying rocks, indent the shoreline. From Ras al Hamra, the coast continues W, then N for 190 miles, to Ras Diba.

Sahil al Batinah is that section of the coast lying between a position 15 miles W of Ras al Hamra and a position 135 miles farther to the WNW.

Ash Shamailiyah is the area comprising the remaining coastal section as far N as Ras Diba. The coast of Sahil al Batinah is sandy, with occasional sand hills; the general elevation along this whole section is about 8m. Inland, the country is mostly level for a distance of 12 miles.

Off Ash Shamailiyah, the terrain changes; the shoreline is fronted with cliffs and broken by sandy bays. Inland, the coastal plain narrows gradually until about midway along this section, where the hills slope downward to the shore.

**Tides—Currents.**—The W portion of the Gulf of Oman lies outside the region of alternating monsoon winds and possesses no currents related to them. The currents that do exist are variable and exceed 1 knot.

During the period from April to August, evidence indicates that currents set into the Gulf of Oman in directions between N and W; similarly, there appears to be a current setting out of the gulf during the period October to January.

**Depths—Limitations.**—Between Masqat and Ras as Sawadi the 200m curve lies about 5 to 15 miles offshore.

From NW of Ras as Sawadi, the curve parallels the coastline, at a distance of 13 to 16 miles, to the vicinity of Al Murayr, where it widens gradually to about 43 miles offshore at Ras Dabbah.

The Jazair Daymaniyat are the only off-lying dangers along this part of the coast. This area has not been thoroughly surveyed and the harbors and inlets are suitable only for small local craft.

11.9 Ras Masqat (23°38'N., 58°37'E.) is the N extremity of Jazirat Masqat and the E entrance point of Khawr Masqat. It is a round sloping bluff, with cliffs to the S of it. The bluff is fronted by a reef, which is marked to the N by a lighted buoy. Fisher's Rock, 3m high, lies close N of the bluff.

A main light, equipped with a racon, is shown from a tower standing on the N summit of the island, 0.1 mile S of Ras Masqat. A prominent tower is situated on the NW extremity of the island, W of the light.

**Masqat** (Muscat) (23°37'N., 58°37'E.), the capital, has ceased to be a commercial port. It is now served by the modern port of Mina Qabus (Port Sultan Qaboos) in Dawhat Matrah, 1.3 miles W of Ras Masqat.

Khawr Masqat, the site of the former port at the W side of Jazirat Masqat, now lies within a prohibited area.

Qal at Jalali, a fort, stands on a small hill, 46m high, about 0.5 mile S of Ras Masqat Light. It has been restored and is conspicuous, especially in the morning sun against the dark land behind it. The fort is illuminated at night.

The Royal Palace, an prominent gold and blue building, stands 0.2 mile WSW of Qal at Jalali at the head of Khawr Masqat. It is the largest structure situated along the seafront. The roof is flat and surmounted by a flag staff.

Hisar Mirani, a fort, stands close NW of the palace. It has three towers and a battery on the shore below it. This fort, which is illuminated at night, is conspicuous.

Sirat al Gharbiyah, another prominent fort, stands on a small promontory at the W side of Khawr Masqat, 0.4 mile SW of Ras Masqat Light. It is reported to be radar conspicuous.

# Mina Qabus (Port Sultan Qaboos) (23°37'N., 58°34'E.)

#### World Port Index No. 48250

11.10 Mina Qabus, located on the NW side of Dawhat Matrah, is protected on the N by a breakwater extending SE from Ras Kawasir. The approaches to the port are contained within a prohibited anchorage area, which may be best seen on the chart.

**Winds—Weather.**—The prevailing winds are NW and SE, with winter winds out of the SW and W and summer winds from the E. During January and February, the winds are fresh with some rainfall.

The fine weather experienced from March to May becomes very hot during the months of June through September.

October brings the return of fine weather, with gradually cooling temperatures continuing until December. Strong shamals occur at all times of the year.

Winds of any force from NW to NE raise a considerable sea and swell in Khawr Masqat and Dawhat Matrah.

**Tides—Currents.—**The tides generally rise about 1.4m while spring tides rise 1.9m. A strong SE set, with a rate of up to 4 knots, has been reported to exist in the approach to the port.

**Depths—Limitations.—**The seaward approaches to the harbor are deep and clear of dangers, with the 20m curve lying about 0.2 mile NE of the breakwater head. The harbor entrance channel has a depth of 13m.

The outer part of the harbor has a dredged depth of 13m (1994). The center part has a dredged depth of 9m and the inner part has a dredged depth of 8m.

The port provides a total of 13 commercial berths, nine of which can accommodate seagoing vessels.

Berth No. 1 and Berth No. 2, on the W side of the breakwater, are 286m and 183m long, respectively, and have depths of 13m alongside.

Berth No. 3, at the head of the outer basin, is 228m long and has a depth of 11m alongside.

Berth No. 4 and Berth No. 5 form the container terminal and are situated on the W side of the outer basin. They are each 183m long and have a depth of 10.5m alongside.

Berth No. 6, located at the head of the middle pier, is 198m long and has a depth of 9.2m alongside.

Berth No. 7 and Berth No. 8 are located on the E side of the center basin. They are each 183m long and have a depth of 9.2m alongside.

Berth No. 11, located at the SW side of the center basin, has a depth of 9.1m alongside.

The other berths, in the center and inner basins, provide 533m of total quayage, with depths of 4 to 8m alongside.

The port has facilities for container, general cargo, and ro-ro vessels. Vessels up to 260m in length, with a maximum beam of 38m and a maximum draft of 12.5m, can be accommodated.

**Aspect.**—A number of conspicuous silos stand in the NW part of the port, about 0.5 mile WNW of the breakwater head. Two prominent gantry cranes stand on the container quay, about 0.3 mile W of the breakwater head.

A conspicuous observation tower, 68m high, stands close S of Ras al Baz, about 0.5 mile SE of the breakwater head. It is illuminated at night.

For additional landmarks in the vicinity of Khawr Masqat, see paragraph 11.9.

For information on Jazirat al Fahl, see paragraph 11.12.

**Pilotage.**—Pilotage is compulsory for commercial vessels over 150 nrt. Pilots can be contacted by VHF and board between 0.7 and 1 mile NE of the breakwater head.

Vessels must send an ETA and request for pilotage through the agent 72 hours, 48 hours, and 24 hours in advance. The message must include length, draft, grt, and nrt. Vessels should then contact the port control by VHF 3 hours before arrival.

During major dredging operations, inbound vessels must contact the port control and confirm their ETA when 5 miles from the breakwater.

**Regulations.**—Special regulations are in force concerning dangerous or hazardous cargo. Vessels should be well-acquainted with these regulations before berthing.

Anchorage.—A designated waiting anchorage, the limits of which may best be seen chart, lies centered about 1 mile NNW of the breakwater. This anchorage is for vessels awaiting instructions within the territorial waters of the Sultan of Oman and no other anchorage may be used. All vessels intending to use this anchorage must contact Port Sultan Qaboos Port Control, give their particulars, and request an anchorage position. All vessels must be represented by a local agent before permission for anchoring will be granted.

Special regulations are in force for all vessels using the anchorage, and are subject to harbor dues, except for tankers waiting to proceed to the SBM moorings.

**Directions.**—Approaching from N or W, all vessels must steer to pass N and at least 1 mile E of Fahal Fairway Lighted Buoy (23°40.9'N., 58°32.6'E.), which is moored 2 miles E of Jazirat al Fahl. They must then remain at least 1 mile E of the lighted buoy before making the approach to the pilot boarding position in order to ensure adequate clearance from the tanker moorings in Mina al Fahl.

Under no circumstances should vessels approach or enter Khawr Masqat or wait in the prohibited anchorage area.

## Mina al Fahl (23°39'N., 58°32'E.)

#### World Port Index No. 48255

**11.11** Mina al Fahl, located in a shallow bight about 3 miles W of Mina Qabus (Port Sultan Qaboos), is centered within a Restricted Area, which may best be seen on the chart.

**Winds—Weather.**—See Mina Qabus (Port Sultan Qaboos), in paragraph 11.10.

**Tides—Currents.—**Spring tides rise about 3m.

**Depths—Limitations.—**Three SBM tanker berths, which may best be seen on the chart, lie up to 2 miles N of the coast and are connected to the shore facilities by submarine pipelines.

SBM No. 1 has a depth of 34m and can handle vessels up to 230,000 dwt, with a maximum draft of 19.5m.

SBM No. 2 has a depth of 43m and can handle vessels up to 600,000 dwt, with a maximum draft of 29.3m.

SBM No. 3 has a depth of 20m and can handle vessels up to 100,000 dwt, with a maximum draft of 14m.

The smallest tanker acceptable for loading crude oil at SBM No. 1 and SBM No. 2 is 60,000 dwt.

There are also two inshore mooring berths for coastal tankers with drafts up to 4.5m.

**Aspect.**—Numerous oil tanks line the shore in the vicinity of the port. Radio masts are charted about 2 miles ESE of Ras al Hamra. Six chimneys and a flare are charted, respectively, about 0.1 mile E and 0.5 mile SW of the radio masts.

**Pilotage.**—Pilotage is compulsory for tankers. Pilots can be contacted by VHF and board about 1.5 miles NE of Jazirat al

Fahl or 1 mile E of the Fahl Fairway Lighted Buoy (23°40.9'N., 58°32.6'E.), depending on the current.

Vessels must send an ETA and request for pilotage 120 hours, 96 hours, 72 hours, 48 hours, and 24 hours in advance to PETROMAR MUSCAT by telex, fax, or through Muscat Radio (A4M). Any change in excess of 2 hours must be sent.

Vessels must then contact Fahl Control (Fahal Control) 2 hours prior to arrival on VHF channel 12.

The 120-hour message must include the following:

- 1. Vessel's ETA (local time and date).
- 2. Time vessel will tender Notice of Readiness, if different from the ETA.
- 3. Confirmation that vessel is fully inerted to Oman Petroleum requirements.
  - 4. Last port of call.
  - 5. Next port of call.
  - 6. Quantity of cargo required.
  - 7. Time requested for deballasting prior to loading.
  - 8. Maximum draft on arrival and trim.
  - 9. Maximum draft on departure.
  - 10. Safe working load of crane or hose-handling derrick.
- 11. Number, type, size, and safe working load of bowstoppers for securing SBM mooring chains.
  - 12. Flag of vesseL.
  - 13. Master's name.
  - 14. Any deficiences affecting performance.

All vessels, when in port or waiting off the port, should maintain a continuous listening watch on VHF channel 12. During loading operations, contact is made via a shore provided UHF radio, with VHF for back-up.

It has been reported VHF communication extends up to 80 miles N of the port, but only 20 miles E of the port.

**Regulations.**—The loading facilities are enclosed within a restricted area, which extends up to 3 miles seaward. Unless proceeding to the offshore terminal berths, all vessels must stay N of the Fahl Fairway Lighted Buoy and Jazirat al Fahl.

**Anchorage.**—An anchorage area, the limits of which may best be seen on the chart, lies centered 5 miles W of Jazirat al Fahl. The port control will assign anchorage berths, as appropriate. In all cases, tankers are required to anchor at least 2 miles clear of the coast.

**Caution.**—Several obstructions and areas of foul ground lie on the bottom in an area 1.5 to 3.5 miles W of Jazirat al Fahl and may best be seen on the chart.

**11.12 Ras al Abyad** (23°39'N., 58°30'E.), a sloping point, forms the W entrance point of Mina al Fahl.

**Jazirat al Fahl** (23°41'N., 58°30'E.) lies about 2 miles N of Ras al Abyad. The island is 85m high, steep-to, and precipitous. Cliffs overhang all but the SW extremity and the light color of the island shows up well against the mainland.

A main light is shown from a framework tower, 6m high, standing near the center of the island.

The deep passage lying between this island and the coast is free of dangers.

**Ras al Hamra** (23°39'N., 58°29'E.), about 0.5 mile W of Ras al Abyad, is a red cliffy point, 46m high.

A desalination plant, which consists of a prominent building, six tall conspicuous chimneys, and associated storage tanks,

stands close inland, about 5 miles WSW of this point. A jetty extends 0.5 mile N from the coast in the vicinity of the plant.

A prominent hotel stands 2 miles SW of Ras al Hamra. At night, the domes of the hotel are illuminated.

Between Ras al Hamra and As Sib, 18 miles W, the coastline recedes slightly to form the bight of Ghubbat al Hayl. Several small villages stand along this stretch of coast.

**As Sib** (23°41'N., 58°10'E.), which is difficult to identify, affords exposed anchorage, in a depth of 9m, sand, about 0.5 mile offshore. There is no shelter at all.

An international airport is located 1.5 miles inland, about 7 miles SE of As Sib.

**Ras al Ghaf** (Ras al Qaf) (23°42'N., 58°05'E.) is a broad, low point about 5 miles WNW of As Sib. A sandy shoal, with depths of 3.6m, lies 1.5 miles offshore N of Ras al Ghaf.

A prominent group of buildings, enclosed by a white wall, is situated at Bayt al Barakat, 1 mile W of Ras al Ghaf.

**Caution.**—A prohibited area, which may best be seen on the chart, extends up to 2.5 miles seaward from the shore in the vicinity of Ras al Ghaf.

**11.13 Jazair Daymaniyat** (23°50'N., 58°04'E.), known locally as Saba Jazair, consists of several groups of islands, islets, and rocks. These groups lie 7 to 9 miles offshore and parallel the coast for a distance of 12 miles to the W of As Sib. They are without water and are quite barren.

The 200m curve lies 5 to 6 miles N of the islands; the depths for several miles S of them are fairly regular, with depths of less than 30m. The bottom is mainly sand, mud, and shells. These islands form a nature reserve and are contained within a Restricted Area.

The easternmost group consists of Jazirat Kharabah, the E island, located 8.5 miles N of As Sib, and the detached rocks lying off of it. The island is 9m high and consists of black rocky points separated by white sandy beaches. A reef extends off the N and E sides. A depth of 3.4m lies 1.5 miles WSW of Jazirat Kharabah.

The middle group consists of seven islets and some detached rocks. The two largest islets are 16m and 25m high, with low light-brown cliffs, and are difficult to distinguish at night. The easternmost islet in the group lies 3 miles WNW of Jazirat Kharabah. These islets are reported to be steep-to, with no offlying shoals

A main light is shown from a metal tripod standing at an elevation of 27m on the summit of the westernmost islet of the middle group. A racon is situated at this light.

The westernmost group, located 4 miles WSW of the W islet in the middle group, consists of Jazirat Jun and three rocks. There are depths of 30m in the danger-free passage separating the W and middle groups. Jazirat Jun, light brown and difficult to see at night, is about 30m high near its W end.

Anchorage is available off a small sandy beach on the S side of the islet, in 12.8m, sand. This anchorage is sheltered from the N, although considerable swell sets around the islets during strong winds.

A rocky depth of 7.8m lies 0.5 mile S of Jazirat Jun. A rocky spit with depths of 3.2m extends SE for about 0.1 mile from the W rock in this group.

**Clive Rock** (23°50'N., 57°57'E.), a coral rock lying about 1 mile WNW of Jazirat Jun, has a least depth of 3.1m.

There are depths of about 25 to 35m at a distance of 0.5 mile from the rock. Clive Rock is visible under most conditions as a green patch.

**Caution.**—A nature reserve area, which may best be seen on the chart, encloses Jazair Daymaniyat. Fishing other than by local boats, anchoring, diving, and approaching within 2,000m of any island are prohibited.

**11.14 Barka** (23°42'N., 57°54'E.) is located about 10 miles W of Ras al Qaf. The town extends along the coast for about 3 miles. A conspicuous building with four towers stands in the center of the town.

Anchorage is available, in a depth of 9m, sand, 1 mile offshore. The open roadstead is unprotected. Depths decrease gradually toward the shore, but irregular depths of 9.1 to 16.5m extend NE from the anchorage for 3 miles.

**Ras Suwadi** (Suwadi Point) (23°57'N., 57°48'E.) is a low, sandy point located about 7 miles WNW of Barka.

**Jazair Suwadi** (23°57'N., 57°48'E.), seven in number, all lie within 1 mile of Ras Suawadi. Jabal Add, the largest and farthest E, is a table-topped islet, 87m high.

Cliffs front the seaward side of Jabal Add; there is a small sandy bay on the W side. The drying channel between the islet and Ras as Sawadi is only 0.2 mile wide. The other six islets are precipitous, with heights ranging from 15 to 37m.

**Wudam** (Said Bin Sultan Naval Base) (23°50′N., 57°32′E.) is the principal operational base for Oman's navy; there are no commercial berths or facilities. The principal berth for visiting vessels lies alongside the Operational Jetty, on the S side of the harbor.

The berths along the outer face are reported to be dredged to a depth of 7m (1995). Two breakwaters enclose a basin about 0.6 mile in extent. The harbor is approached through a channel dredged (1992) to a depth of 8.5m. It is reported that the main harbor basin has been dredged (1995) to a depth of 6.5m.

A light, equipped with a racon, is shown from the head of the NW breakwater. A lighted fairway buoy is moored about 1.3 miles NE of the NW breakwater head. The entrance fairway is indicated by directional sector lights, ranges, and lighted beacons, which may best be seen on the chart.

The tidal currents in the vicinity of the harbor are weak.

A prominent water tower, 27m high, stands close S of the root of the NW breakwater. A prominent radio mast, 54m high, stands near the root of the SE breakwater. A stadium, 41m high, and a water tower, 32m high, are situated 0.2 mile S of radio mast. A conspicuous yellow building, a covered repair shed, stands on the S side of the harbor.

A conspicuous yellow minaret, with a white balcony and a green cupola, stands close to the shore in the center of Wudam Sahil, a fishing village located 1.5 miles SE of the harbor.

**Caution.**—Anchorage is prohibited within an area, shown on the chart, extending up to about 5 miles offshore in the vicinity of the harbor.

A restricted area extends up to 1.5 miles offshore in the vicinity of the harbor and may best be seen on the chart. Entry is prohibited without authority, other than for emergency or stress of weather, in this area.

**11.15 As Suwayq** (As Suwaiq) (23°51'N., 57°27'E.) is located about 5 miles W of Wudam. A large and prominent fort

stands in the middle of the town. Two hills, light yellow and 213 to 300m high, stand 16 miles SW of the town and show up well from seaward against the dark mountains inland.

**Al Khaburah** (24°00'N., 57°06'E.), one of the most important towns on this coast, extends for 1 mile along the shore. A prominent fort, with two partly ruined towers, stands near the center.

**Makhailif** (24°07'N., 56°57'E.) is a small town. A conspicuous high fort stands in its vicinity and is the most prominent landmark along this coast.

Saham, a large inconspicuous town, is situated 4 miles NW of Makhailif. Some of the buildings and a tower, 137m high, are prominent from seaward.

**Suhar** (As Suhar) (24°23'N., 56°45'E.) lies 30 miles NW of Al Khaburah. A prominent tower, 33m high, stands in this town and is sighted before the date groves which are continuous in this area. A prominent radio mast is situated 6 miles S of the town.

A T-headed jetty, used for the export of bulk solid commodities, extends about 0.7 mile from the shore, about 1.8 miles NW of the town. The berth, 110m long, is reported to handle vessels up to 10,000 tons.

Anchorage is available at Suhar, 1 mile offshore, in a depth of 9m, sand. Depths shoal gradually toward the shore.

**11.16 Jabal Suhar** (Hura Bargha) (24°17′N., 56°33′E.), located about 12 miles WSW of the town, rises from the plain between the shore and the mountain range farther inland. The conical peak is 511m high, light brown in color, and, when visible, a good landmark. When bearing less than 225°, this peak appears triangular in shape.

**Majis** (24°28'N., 56°40'E.) is a town with a conspicuous white minaret at its NW end. In the center of the town is a long low inconspicuous fort with a square tower at its NE corner.

A marine farm, marked by a light, is situated about 3 miles offshore in the vicinity of the town.

**Shinas** (Ash Shinas) (24°46′N., 56°29′E.), a small town, is located about 27 miles NW of Suhar. An inlet used by dhows is entered 1.5 miles N of Shinas; it extends parallel with the shore fronting the town.

Anchorage is available a short distance N of the town off the mouth of the inlet, in a depth of 9m. The depths shoal gradually toward the shore.

It is reported (1998) that a fishing harbor, protected by breakwaters, is being constructed in the vicinity of Shinas.

**Khatmat Malahah** (24°59'N., 56°21'E.) is a dark ridge of hills sloping down to the coast. The border between Oman and United Arab Emirates lies in the vicinity of this ridge.

**Khawr al Kalba** (25°02'N., 56°22'E.) is a village standing on the N side of a creek. Breakwaters extend about 900m ENE from each side of the creek to form a small craft harbor.

Kalba, a large village, stands 3 miles N of Khawr al Kalba; a large prominent building with a tower, which resembles a castle, is situated in it.

It is reported (1998) that a fishing harbor, protected by breakwaters, fronts the shore at Kalba.

**Caution.**—It is reported (1999) that construction of the Port of Sohar (24°31'N., 56°35'E.) is being carried out in an area extending up to 10 miles from the shore, about 15 miles SSE Shinas.

# **Fujayrah Harbor** (25°10'N., 56°20'E.)

#### World Port Index No. 48262

11.17 Fujayrah Harbor consists of a stretch of coast enclosed by two breakwaters. The N breakwater extends SE and S to overlap the S breakwater and form an entrance facing S

**Tides—Currents.—**The tides rise about 2.6m HW and 0.6m at LW.

**Depths—Limitations.**—The harbor entrance channel is dredged to a depth of 15m (2000). The N part of the harbor basin is dredged to a depth of 15m (2000); the center paris dredgedt to a depth of 12.5m (1986); and the Sis dredged part to a depth of 7m (1986).

The harbor breakwaters extend about 0.6 mile from the coast and form an entrance about 215m wide.

The port provides about 1,070m of total berthage. There is 600m of quayage with a depth of 12.5m alongside; 180m of quayage with a depth of 11.5m alongsid; and 290m of quayage with a depth of 7m alongside. There are also several mooring buoys within the harbor. There are facilities for ro-ro, general cargo, container, tanker, and livestock-carrier vessels.

Vessels up to 275m in length, with a maximum draft of 12.5m, can be accommodated.

Van Ommeran Tanker Terminal, a T-head jetty 1,000m long, is situated 2 miles N of Fujayrah harbor. The terminal has an outer berth, 60m long, with a depth of 18m alongside and an inner berth, 35m long, with a depth of 14.5m alongside. Berthing and mooring dolphins are provided at each berth.

The jetty is approached from the SE through a buoyed channel, 485m long, which has a least depth of 17m.

**Aspect.**—Fujayrah Light is shown from a structure standing on high ground, 0.7 mile NW of the root of the S breakwater. A prominent radio mast stands at an elevation of 400m, about 1.7 miles NNW of the light.

Al Gurfah, a fishing harbor, lies 3 miles S of the port; two conspicuous radio masts stand about 0.6 mile W of it. Another conspicuous radio mast stands at an elevation of 137m about 3 miles W of this harbor.

Each breakwater head at Fujayrah is marked by a light. The light at the N breakwater head is equipped with a racon.

The harbor entrance channel is indicated by a directional sector light and is marked on its W side by lighted buoys.

The signal station and port control tower, 28m high, stands near the root of the S breakwater.

**Pilotage.**—Pilotage is compulsory for entering the harbor. The pilot can be contacted by VHF and boards about 0.5 mile ENE of Fairway Lighted Buoy. Pilots for the Van Ommeran Tanker Terminal board E of the terminal.

Vessels should send an ETA message and a request for pilotage through the vessel's agents at least 72 hours in advance, confirming 24 hours and 12 hours prior to arrival.

The message should contain the following information:

- 1. Vessel's name.
- 2. Type of vessel.
- 3. NRT.
- 4. Vessel's condition.
- 5. ETA.

- 6. Last port of call.
- 7. Purpose of call.
- 8. ETD.
- 9. Next port of call.

All vessels should contact the port control on VHF channel 16 when within VHF range.

Vessels arriving at the offshore anchorages must inform the port control at least 2 hours prior to arrival of the following information:

- 1. Vessel's name.
- 2. Type of vessel and condition.
- 3. Agent's name.
- 4. IMO number.
- 5. Port of registry.
- 6. Flag.
- 7. GRT.
- 8. DRT.
- 9. Length.
- 10. Nature of call.
- 11. Last port of call.
- 12. Next port of call.
- 13. ETA.
- 14. Master's name.

Vessels intending to enter the harbor or to anchor within the port limits should contact with the port control as soon as possible on VHF before entering within 4 miles of the coast. Such vessels must request instructions and keep a listening watch on the VHF channel 16.

**Anchorage.**—Five designated anchorage areas, the limits of which are shown on the chart, lie E and NE of the port, as follows:

- 1. Anchorage Area A—vessels awaiting orders or intending a long stay.
- 2. Anchorage Area B—vessels requiring bunkering services.
- 3. Anchorage Area C—vessels requiring offshore services.
- 4. Anchorage Area D—vessels carrying hazardous cargo and for all LNG and LPG carriers, whether loaded or in ballast condition, requiring offshore services, including bunkering and deslopping.
- 5. Anchorage Area W—vessels awaiting a berth in the port.

Vessels must obtain permission from the port control before anchoring.

Movements of double-banked (side by side) vessels and rendezvousing between vessels underway and service boats at the offshore anchorages are prohibited.

**Directions.**—Vessels should properly observe the two-way route in the approaches to the port, which may best be seen on the chart. The inbound track lies on the S side of the route.

**Caution.**—Due to the existence of numerous submarine cables, anchoring is prohibited in an area, indicated on the chart, extending from the shore and lying between the parallels of  $25^{\circ}06.5$ 'N and  $25^{\circ}09.5$ 'N.

Fishing zones, the limits of which may best be seen on the chart, front the shore to the N and S of the port. Commercial vessels are prohibited from entering these zones, except in an emergency.

# Khawr Fakkan (25°21'N., 56°23'E.)

#### World Port Index No. 48263

**11.18** Khawr Fakkan (Khor Fakkan), set in the SE portion of a bight in the coast, is a major transshipment point for cargo destined for ports around the region.

**Tides—Currents.—**The tides rise about 2.7m HW and 0.6m at LW.

**Depths—Limitations.**—The entrance fairway, buoyed on its W side, has a dredged depth of 14.6m (1999).

The main container quay, formed by the inner face of the breakwater, provides 1,060m of berthage, with depths of 11.6 to 14.6m alongside.

There is also a cement jetty, 75m long, with a depth of 5m alongside.

Vessels up to 300m in length, with a maximum draft of 12.6m, can be accommodated.

**Aspect.**—The bight containing the port lies between Sirat al Khawr, on the S side, and Ras Lulayyah (Ras Luiyah), a rocky point about 2 miles NW. Sirat al Khawr is a peaked islet, 84m high, lying 0.2 mile off a hilly projection, about 80m high.

A breakwater extending about 0.5 mile NW from the N side of this hilly projection forms the port itself.

A prominent radio tower, 126m high, stands near the root of the breakwater. A number of conspicuous container cranes are situated along the quay.

Jabal Sidr, a prominent hill, is located about 1.5 miles NW of the root of the breakwater. It is 109m high and surmounted by a conspicuous white palace. This palace has a red roof and is illuminated at night.

A conspicuous hotel, illuminated at night, stands on the foreshore, about 0.3 mile NNE of the palace. A prominent building, with five towers which are floodlit at night, is situated on the foreshore, 1 mile S of the hotel.

A lighted fairway buoy, equipped with a racon, is moored about 1.3 miles NE of the breakwater head.

**Pilotage.**—Pilotage is compulsory. Pilots can be contacted by VHF and board about 0.5 mile E of the Fairway Buoy.

Vessels should send an ETA and request for pilotage through their agents 72 hours, 48 hours, and 24 hours in advance. The message should include draft, length, and cargo details.

Vessels approaching the port should contact the port control on VHF channel 67 or 16 when 10 miles, 5 miles, and 2 miles from the port.

Vessels on arrival must inform the port control on VHF of the following information:

- 1. Vessel's name.
- 2. Date and time of arrival.
- 3. anchor position.
- 4. Flag.

- 5. Local agent.
- 6. GRT.
- 7. NRT.
- 8. Last port of call.
- 9. Next port of call.
- 10. Purpose of anchorage.

Vessels should maintain a watch on VHF channel 16 from 12 hours before their ETA.

For information concerning deep-sea pilotage, see paragraph

**Anchorage.**—Anchorage, open to NE winds, is available in the bay, with the permission of the port control and clear of the dredged channel.

It was reported (1983) that anchorage could be obtained in the vicinity of position 25°30'N, 56°40'E. This area is known locally as Norwegian Bank, although no significant reduction in depths was observed.

**Caution.**—Anchoring is prohibited within territorial waters unless the vessel is waiting to enter Khawr Fakkan or requiring certain facilities from the port. Large tankers are not permitted to anchor within 10 miles of the coast.

Fishing zones, the limits of which may best be seen on the chart, front the shore to the N and S of the port. Commercial vessels are prohibited from entering these zones, except in an emergency.

An explosives dumping ground area (disused 1996), the limits of which may best be seen on the chart, lies centered about 34 miles ESE of Khawr Fakkan.

**11.19** From Khawr Fakkan, the coast continues N for 16 miles to Ras Diba. A fishing harbor, protected by breakwaters, lies 1.5 miles NNE of Ras Lulayyah. An airfield is situated about 0.5 mile SW of this harbor.

Zubarah, a small village, stands close N of the fishing harbor. The coast is low, sandy, and bordered by date groves in this vicinity. The mountains stand only a short distance inland.

Jazirat Badiyah, an islet, lies close offshore, 3 miles N of Ras Lulayyah. It is 58m high and joined to the coast by a causeway.

Beyond Jazirat Badiyah, the coast becomes more rugged, changing to rocky points separated by many sandy bays, with mountains rising abruptly a short distance from the shore.

**Ras Diba** (25°36'N., 56°22'E.) is a projecting point formed of moderately high cliffs. A cliffy sand bluff located about 1 mile W of the point is conspicuous from N but not from E. An islet lies close offshore, 0.5 mile NW of the point.

It is reported (2001) that a conspicuous radio mast stands on the point.

**Caution.**—An anchorage prohibited area, the limits of which may best be seen on the chart, extends up to 12 miles seaward between Khawr Fakkan and Ras Diba.